245 fore, knolls or rolling lands are preferred and gravelly,
311 sandy or light loam soils are chosen.

There are neither rolling lands nor tilthy knolls in Hunza. Here they have to take what they can get and make the best of it. The precipitous bits of arable land are terraced to prevent erosion and the flat pieces, such as there are, create no drainage problem because there is no danger of too much rain.

You will seldom see more than a few dozen fruit trees in one group or area. They are scattered here, there and everywhere and are planted only where and when they can grow to best advantage.

I would also like to mention that fruit and walnut trees are found growing almost everywhere along the roads or trails in the populated area, so no bit of arable land, no matter where it is found, is wasted.

245 I do not know if there is any dispute as to who owns the crops but all the way from Gilgit to Altit I did not find a bit of ripe fruit on the trees—which means most clearly that somebody harvests the crops at just the right time or when the fruit is at or about proper maturity.

• 133 From some of the larders that I examined, I gathered
251 that they certainly wouldn't have any overabundance and I further felt that, by the time winter and early spring passed and before the new crops were ready to harvest, some bellies might have thinned out and some more might even be hungry.

There was no reason for me to disbelieve the Mir when he said Hunza was the "land of just enough" but I still felt that, by the look of things, there would be many occasions when that "just enough" might have to be stretched a little. I was convinced that they certainly did not have too much of any food commodity.

142 The only two stout men that I met on my entire

7:Tobe C, T-3 (1959)1960 AV7 Burusho AV7
Hunza

Both the irrigation water which they use on their fields and their drinking water come from the Ultar Glacier. Therefore, their entire water supply is glacial. 312

Their entire economy is dependent upon their agriculture and everything that is taken from the soil is religiously returned to the soil. Chemical fertilizers or chemical sprays of any type are unknown to the people. It may be possible that the Mir has used sprays in his palace grounds. He might have brought them with him from his visits abroad, but I saw none and, to the best of my knowledge and belief, none are used. I saw no insect infestation of any kind or type through my entire travels and investigations. In Gilgit I did see insect injury in a garden and it was apparent to me that the soil of Hunza was in balance and therefore it produced food that was balanced. Therefore, it is understandable, the people of Hunza are healthy! 241 [433]

The food of the people of Hunza is in the main, raw food. It is neither dissected nor desiccated, but is eaten in the whole. The only exception that I could find to this rule was in their milk. When they made butter, they drank the remains or the buttermilk. Of course, in due time, they ate the butter. 262

All children born in Hunza are breast fed for at least two years. Male children are often breast fed until they are 3 years old. 853

I do not intend to stress any one factor of the points mentioned above. I am submitting them to you for your consideration and study. 000

It is, however, my belief that their soil and location does not lend itself to mechanization and therefore their good health should continue. If they could mechanize, then they would not get the needed beneficial exercise which, as you can gather, is one of the important contributors to their good health and longevity. 241 164

842 The country cannot afford or support a greater population than exists there today. Therefore, they will have to practice birth control, which it is claimed they already do but with which I disagree, or they will have to send their youths out of the country, which, as a matter of fact, they are doing.

311 There is very little chance of finding or creating more arable land in the country. I believe they have practically every inch tilled now that is tillable. There is no land left in that part of the world that is yet to be broken.

Their land and their fruit trees are their whole life. Their health, pleasant dispositions and industry, which they possess to the highest degree, are their entire wealth.

578 Quarreling among children and adults seems to be something that doesn't exist in Hunza. I found close affection and love was the general, accepted pattern throughout the area. This is even more surprising when you realize that most of the houses in the villages are built practically one on top of the other.

181 It was clear to me that they knew no worries and
152 that they create no worries. There was absence of jealousy, greed, covetousness and hurry. Their outlook on life is most unpretentious. They are proud people and do not grovel before anyone and they do not pretend to be anything but what they really are.

433 Every Hunzan farmer is completely self-sufficient, even though he might trade for something that is in short supply or that he would like to possess. He grows wheat, barley, potatoes, millet, cabbage, beans, onions, lettuce and occasionally a bit of rice. In their orchards they have apricots, apples, pears, walnuts and mulberries. Every family has sheep and goats and sometimes a cow or an ox, and occasionally a yak. They till

7:Tobe C, T-3 (1959)1960 AV7 Burusho AV7
Hunza

their own land. They spin their own wool. Then they weave it into cloth from which they cut and sew their clothes. However he can also buy or trade for woolen cloth or he can have his own wool woven for him.

They have little or no money. The few dollars that he might get during the year would come from the expeditions that congregate in the area and hire the Hunzans as porters. And they are unsurpassed at this difficult and arduous work.

A man has a right to inflict corporal punishment upon his wife if she nags him. Perhaps that is why the men of Hunza have that cheerful look.

The children are never neglected because the parents are always at home. Further, the children do their share of the work in the fields and are taught to do so from early childhood. This also eliminates juvenile delinquency.

The people of Hunza have splendid dispositions. They are genial, pleasant, smiling and cheerful. They have deep respect for authority, profound love of the land, affection, compassion and understanding for their neighbors and they are most hospitable to strangers. They hold their heads high, their chests out and they are strong, honest and hard-working. To me this showed clearly and positively that people can live and that agriculture can exist and thrive without chemistry, chemical fertilizers, chemical sprays or synthetic medicines and drugs.

They enjoy happiness without modernization, long life without doctors, nurses and hospitals, democracy without bureaucracy, law and order without police and self-sufficiency without money. Part of the answer, if not most of it, is their loyalty to and their faith in their land, a pure case of unremitting agriculture and putting everything back into the soil which was taken

8: Clark N-5 (1948-1951)1963
AV7 Burusho AV7
Hunza
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CRAFTSMEN like this weaver are not numerous in Hunza; the demanding mountain economy requires the full-time effort of the society to raise food.

134 311 so sterile that Hunzas have told me, "If you irrigate new land, you must eat for five years somewhere else."

241 134 [237] HUNZAS are skilful at building a limited fertility into their sterile material, given enough time. All sheep manure is carefully saved, and the fields are fertilized with it four times during each growing season. Frequent irrigation works with summer warmth and mountain snow to decompose the manure rapidly. The growing plants thus have a few weeks of available food after each fertilization, before drainage again removes the plant food. Hunza farming is actually hydroponic gardening, with the soil functioning merely to anchor the plants.

Plainly, the plants will receive enough of only those foods that occur abundantly in sheep manure. Nitrates, phosphates, and probably calcium are deficient. Yields of wheat and alfalfa are notably lower per acre than are yields from better-fertilized American acres. Apricot trees generally have reddish leaves at the growing tips, a sure sign of soil deficiencies.

433 241 237 Even the most painstaking hydroponic gardening cannot compensate for deficiencies in the food chemistry. Moreover, their system makes Hunza one of the few countries where an agrarian economy is absolutely dependent upon the pastoral economy.

[233] Even in the high mountain summer pastures, the sheep are carefully herded into small cotes in order to preserve each night's droppings. Every few days a man climbs down the steep trail with a load of manure on his back. Effectively, the fertility of the high mountain pastures is being transferred down to Hunza's fields.

433 161 167 Unfortunately, the human population has already grown so large that the fields cannot provide sufficient food. Hunzas are moving out of their country in rather large numbers. Although the exact total of annual emigrees is unknown, it is clear that most of them go to the lower villages near Gilgit, where they soon displace their less industrious Shouna predecessors. Hundreds of Hunza's young men [649] join the Pakistan army. Others take [464] work as servants, where their honesty, [181] industry, and common sense make them highly valued. The Hunzas realize, as certain Western tourists do not, that their country is a land of little food, and even less opportunity for the future, picturesque as it is.